IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

CORDIS CORPORATION, Plaintiff, v. BOSTON SCIENTIFIC CORPORATION, BOSTON SCIENTIFIC SCIMED, INC., and MEDTRONIC AVE, INC. Defendants.	)	Civil Action No. 97-550-SLR (consolidated)
MEDTRONIC AVE, INC., Plaintiff, v. CORDIS CORPORATION, JOHNSON & JOHNSON and EXPANDABLE GRAFTS PARTNERSHIP, Defendants.	)	Civil Action No. 97-700-SLR

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MEMORANDUM OPINION

Dated: March 27, 2006
Wilmington, Delaware

ROBINSON, Chief Judge

I. INTRODUCTION

Plaintiffs Expandable Grafts Partnership and Cordis Corporation ("Cordis") originally filed this patent infringement action on October 3, 1997 against defendants Medtronic AVE, Inc., Boston Scientific Corporation and Scimed Life Systems, Inc.[1] Cordis alleges that Medtronic infringes certain claims of United States Patent Nos. 4,739,762 (the "'762 patent") and 5,195,984 (the "'984 patent"). Cordis accuses BSC of infringing certain claims of the '762 patent and United States Patent Nos. 5,902,332 (the "'332 patent"), 5,643,312 (the "'312 patent"), and 5,879,370 (the "'370 patent"). In the fall of 2000, a jury trial was held to decide issues of infringement and damages. The jury found that the accused stents of Medtronic infringed, under the doctrine of equivalents, the asserted claims of the '762 patent. The district court granted JMOL of noninfringement, finding that Cordis was estopped from asserting infringement under the doctrine of equivalents. Cordis appealed the JMOL decisions to the Federal Circuit. The Federal Circuit reversed this court's original claim construction and remanded the case for further proceedings. Cordis Corp. v. Medtronic AVE, Inc., 339 F.3d 1352 (Fed. Cir. 2003). On March 14, 2005, after a retrial of the case, the jury found the asserted claims of the '762 and '984

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[1]Defendant Medtronic AVE, Inc. will be referred to as "Medtronic." Defendants Boston Scientific Corporation and Scimed Life Systems, Inc. will be referred to collectively as "BSC."

patents infringed and nonobvious. (D.I. 1358)[2] Following that verdict, the court entered judgment in favor of Cordis and against Medtronic on March 31, 2005. (D.I. 1374) On March 24, 2005, the jury found that BSC's NIR stent infringed claim 23 of the '762 patent, which the jury concluded was nonobvious. (D.I. 1366) Pursuant to this verdict, the court entered judgment in favor of Cordis and against BSC on March 31, 2005. (D.I. 1375)

Before the court are Medtronic's motion for a new trial on Cordis' patent infringement claims and Medtronic's invalidity counterclaims, and Medtronic's motion for judgment as a matter of law on Cordis' patent infringement claims. (D.I. 1383, 1384) For the reasons stated, Medtronic's motion for a new trial is denied and Medtronic's motion for judgment as a matter of law is denied.

II. BACKGROUND

The '762 patent is directed to a slotted tube stent. The '984 patent is directed to flexibly connecting the prior art slotted tube stents with a single connecting member parallel to the longitudinal axis of the stents. The preferred embodiments in both of the asserted patents each have a wall of "uniform thickness", where the thickness of the walls along the length of each stent does not vary. In addition, the asserted claims all

[2]Unless otherwise noted, the docket item ("D.I.") numbers cited in this memorandum opinion refer to Civ. No. 97-550-SLR.

disclose a tubular member, or plurality of tubular members, with a wall having a "substantially uniform thickness." The Medtronic stents accused of infringing the asserted patents are the MicroStent II, the GFX, and the GFX2. These accused stents are the subject of several patents owned by Medtronic, and each such stent consists of a series of rings that have been laser fused together.

Upon its initial construction, the "substantially uniform thickness" limitation of the asserted claims was construed by the court to require that the thickness of the stent's wall surface not vary by 0.001 inch or more. (D.I. 790) In response to the Federal Circuit's opinion reversing certain parts of the claim construction, the "substantially uniform thickness" limitation was reconstrued by the court to mean that the walls "must be of largely or approximately uniform thickness." (D.I. 1251 at 2 n.1) The court instructed the jury that "substantially uniform thickness" means: "The wall of a tubular member must be of largely or approximately uniform thickness. A wall that varies in thickness by as much as 100 percent cannot be said to be of substantially uniform thickness." (D.I. 1357 at 22-23)

In its motion for a new trial, Medtronic contends that the accused Medtronic stents do not infringe claims 23, 51, and 54 of the '762 patent and claims 1 and 3 of the '984 patent. Through that motion, Medtronic also asserts that those claims are

invalid. Furthermore, Medtronic moves for judgment as a matter of law as to the infringement claims of Cordis.

III. STANDARD OF REVIEW

A. Renewed Motion for Judgment as a Matter of Law

Medtronic has renewed its motion for judgment as a matter of law pursuant to Fed. R. Civ. P. 50(b) on the infringement claims of Cordis. To prevail on a renewed motion for judgment as a matter of law following a jury trial, the moving party "'must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury's verdict cannot in law be supported by those findings.'" Pannu v. Iolab Corp., 155 F.3d 1344, 1348 (Fed. Cir. 1998) (quoting Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir. 1984)). "'Substantial'" evidence is such relevant evidence from the record taken as a whole as might be acceptable by a reasonable mind as adequate to support the finding under review." Perkin-Elmer Corp., 732 F.2d at 893. In assessing the sufficiency of the evidence, the court must give the non-moving party, "as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor, and in general, view the record in the light most favorable to him." Williamson v. Consol. Rail Corp., 926 F.2d 1344, 1348 (3d Cir. 1991); Perkin-Elmer Corp., 732 F.2d

at 893. The court may not determine the credibility of the witnesses nor "substitute its choice for that of the jury between conflicting elements of the evidence." Perkin-Elmer Corp., 732 F.2d at 893. In sum, the court must determine whether the evidence reasonably supports the jury's verdict. See Dawn Equip. Co. v. Kentucky Farms Inc., 140 F.3d 1009, 1014 (Fed. Cir. 1998).

B. Motion for a New Trial

Medtronic has moved, pursuant to Fed. R. Civ. P. 59(a), for a new trial on the issues of infringement and validity. Federal Rule of Civil Procedure 59(a) provides, in pertinent part:

> A new trial may be granted to all or any of the parties and on all or part of the issues in an action in which there has been a trial by jury, for any of the reasons for which new trials have heretofore been granted in actions at law in the courts of the United States.

Fed. R. Civ. P. 59(a). The decision to grant or deny a new trial is within the sound discretion of the trial court and, unlike the standard for determining judgment as a matter of law, the court need not view the evidence in the light most favorable to the verdict winner. See Allied Chem. Corp. v. Darflon, Inc., 449 U.S. 33, 36 (1980); Olefins Trading, Inc. v. Han Yang Chem. Corp., 9 F.3d 282 (1993); LifeScan Inc. v. Home Diagnostics, Inc., 103 F. Supp.2d 345, 350 (D. Del. 2000) (citations omitted). See also 9A Wright & Miller, Federal Practice and Procedure § 2531 (2d ed. 1994) ("On a motion for new trial the court may

consider the credibility of witnesses and the weight of the evidence."). Among the most common reasons for granting a new trial are: (1) the jury's verdict is against the clear weight of the evidence, and a new trial must be granted to prevent a miscarriage of justice; (2) newly-discovered evidence exists that would likely alter the outcome of the trial; (3) improper conduct by an attorney or the court unfairly influenced the verdict; or (4) the jury's verdict was facially inconsistent. See Zarow-Smith v. N.J. Transit Rail Operations, 953 F. Supp. 581, 584-85 (D.N.J. 1997) (citations omitted). The court must proceed cautiously, mindful that it should not simply substitute its own judgment of the facts and the credibility of the witnesses for those of the jury. Rather, in order to promote finality after trial, as well as to preserve the historical function of the jury as the trier of facts, the court should grant a new trial on the basis that the verdict was against the weight of the evidence only where a miscarriage of justice would result if the verdict were to stand. See Williamson v. Consol. Rail Corp., 926 F.2d 1344, 1352 (3d Cir. 1991); EEOC v. State of Del. Dep't of Health and Soc. Servs., 865 F.2d 1408, 1413 (3d Cir. 1989).

IV. DISCUSSION

A. Renewed Motion for Judgment as a Matter of Law

A determination of infringement requires a two-step analysis. First, the court must construe the asserted claims so

as to ascertain their meaning and scope. Second, the claims as construed are compared to the accused product. See KCJ Corp. v. Kinetic Concepts, Inc., 223 F.3d 1351, 1355 (Fed. Cir. 2000). Claim construction is a question of law while infringement is a question of fact. See id. To establish literal infringement, "every limitation set forth in a claim must be found in an accused product, exactly." Southwall Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1575 (Fed. Cir. 1995).

In moving for judgment as a matter of law, Medtronic makes three primary arguments. First, Medtronic contends that the "substantially uniform thickness" limitation of the asserted patents cannot encompass a stent which has a wall that varies by as much as 100 percent. (D.I. 1397) Second, Medtronic maintains that the accused stents vary by as much as 100 percent and, therefore, cannot infringe. (Id.) Finally, Medtronic argues that Cordis' theories of infringement are premised on a misreading of the "substantially uniform thickness" limitation. (Id.)

Consistent with the court's most recent construction of the limitation "substantially uniform thickness" and its resulting instruction to the jury, the parties appear to agree that the asserted claims cannot encompass a stent which has a wall that varies by as much as 100 percent. The key issues of contention between the parties are: (1) the method by which one of ordinary

skill in the art would measure the thickness of a stent wall; and (2) the precise meaning of a 100 percent variance in the thickness of a stent wall.

The parties agree that approximately 98 percent of the walls of the accused stents have uniform thickness, namely along the straight portions of the stents known as the "struts." The approximately 2 percent of the walls of the accused stents which remain are curved and are known as the "crowns." It is these portions of the stent walls which Medtronic asserts are of nonuniform thickness such that the wall of the accused stent cannot be said to be of "substantially uniform thickness." (D.I. 1414 at 8-9)

The parties disagree about the particular impact which should result from the discussion of the limitation "substantially uniform thickness" by the Federal Circuit in Cordis v. Medtronic AVE Inc., 339 F.3d 1352 (Fed. Cir. 2003). In that opinion, the Federal Circuit noted that the asserted patent claims require that "it is the wall surface that needs to have a uniform thickness, and the full circumference of the round strut is not involved in making up the wall surface." Cordis v. Medtronic AVE Inc., 339 F.3d at 1362. The Federal Circuit's decision appears to have addressed one of Medtronic's present arguments when it stated:

> [Medtronic] contends that . . . its stents have a variable thickness because they have a round or ellipto-rectangular

> cross-section and thus do not infringe because the cross-sectional thickness of its stent walls varies by more than 100 percent. We disagree and conclude that a stent formed from struts with circular or ellipto-rectangular cross-sections can have a wall of substantially uniform thickness.

(Id.) As the Federal Circuit further explained:

> The district court described the wall surface by stating that "the outer surface of the tubular member must be disposed in a common cylindrical plane." That "common cylindrical plane" is formed by an imaginary circle that intersects with the outermost point of each round strut. The thickness of the wall is equal to the diameter of each round strut, i.e., the distance between the outer point that intersects the wall surface and the corresponding inner point that intersects a similar imaginary cylindrical surface on the inside of the tubular member. Thus, a stent with round struts can have a substantially uniform thickness as long as the round struts have substantially the same diameter.

(Id.) The issue of whether this method of using "imaginary circles" is the only method by which one can measure the thickness of a stent wall was already addressed by this court. In its February 28, 2005 order, the court stated:

> The appropriate test for measuring the thickness of the wall surface at a strut's crowns is a question of fact for the jury, not a matter of law determined by the Federal Circuit. More specifically, the Federal Circuit's discussion with respect to measuring the thickness of a strut does not amount to a holding that one of ordinary skill would only measure thickness a certain way, as the Federal Circuit's statements were made in the context of infringement, not claim construction. Therefore, each party can present evidence with respect to how one of ordinary skill in the art would measure the thickness of the wall surface.

(D.I. 1337 at 5-6) Thus, the parties were free to offer evidence at trial as to whether or not one of ordinary skill in the art

would use an "imaginary circles" approach in determining the thickness of a stent. At trial, Cordis presented evidence that the cross-sectional diameter of a stent's round strut could be used to measure the thickness of a stent wall. (D.I. 1387 at 512:6-515:22, 529:1-534:6) Cordis suggested that the "nominal thickness" of a strut could be the basis for calculating variation such that if the diameter of a strut would constitute the nominal thickness of the accused stents, then no variation in thickness by as much as 100 percent would be present. (D.I. 1389 at 1163:6-1168:1) As Dr. Wagoner, the engineering expert for Medtronic, admitted at trial, if the cross-sectional diameter equals the wall thickness, then the accused stents have walls of substantially uniform thickness. (D.I. 1389 at 1185:20-24) Dr. Collins, Cordis' engineering expert, testified that he would "measure multiple thicknesses in the strut region and multiple thicknesses in the crown region" in order to gauge the uniformity of thickness of the stent. (D.I. 1387 at 512:6-9) Dr. Collins further testified that several Medtronic documents, which listed the thicknesses of each of the three accused stents, revealed that the struts and crowns of each of the stents have "very uniform" cross-sectional diameters. (D.I. 1387 at 537:3, 539:17-18)

Medtronic countered these arguments by arguing that the "imaginary circles" method suggested by the Federal Circuit was

the only method by which one may measure the thickness of the wall of a stent and, once applied to the accused stents, the method shows a variation in thickness by as much as 100 percent in each stent. (D.I. 1397 at 7-13) Medtronic alleges that the arguments presented by Cordis on the issue of infringement were successful in confusing the jury into finding infringement. (D.I. 1397 at 10-18) However, as noted above, the jury was presented with (and was permitted to assign credence to) evidence that the thickness of a stent may be measured by one having ordinary skill in the art in a manner which considers the diameters of the struts rather than utilizes an "imaginary circles" approach. If the former method were used, the jury's putative conclusion that the accused stents have walls of "substantially uniform thickness" and thereby infringe the asserted patents would have sufficient support in the record.

Based on a review of the evidence and arguments offered at trial and an evaluation of the post-trial briefs submitted by the parties, the jury's findings are supported by substantial evidence and the legal conclusions implied by the jury's verdict are sufficiently supported by those findings.

B. Motion for a New Trial

Medtronic advances three arguments in its motion for a new trial. First, Medtronic contends that a new trial is warranted because of a "misleading and incomplete record" concerning the

"substantially uniform thickness" limitation of the patents at issue. (D.I. 1398 at 7-17) Second, Medtronic asserts that a new trial should be granted because Cordis' counsel made numerous improper arguments that likely influenced the jury. (Id. at 17-29) Finally, Medtronic argues that a new trial is necessary because the jury's infringement and nonobviousness verdicts are not supported by the weight of the evidence. (Id. at 29-31)

In alleging a "misleading and incomplete record," Medtronic offers four distinct arguments. First, Medtronic suggests that Cordis' closing arguments left the jury with an incorrect impression of what constitutes a "100 percent" variation. (Id. at 7-11) Second, Medtronic posits that Cordis' arguments on this issue were inconsistent with both the file history of the '762 patent and a relevant Federal Circuit decision. (Id. at 11-13) Next, Medtronic contends that Cordis was improperly allowed to suggest that the Federal Circuit's method of identifying the "thickness" of the walls of a stent was a "big trick." (D.I. 1398 at 14-16) Lastly, Medtronic reasons that it was improperly denied permission to introduce evidence about the clinical significance of its variably thick crowns. (Id. at 16-17)

Despite various contrary assertions by Medtronic, the alleged inadequacies of which Medtronic complains are not present in the record concerning the "substantially uniform thickness" limitation. First, although Medtronic asserts that it presented

"unrebutted testimony that the walls of its stents are twice as thick in some areas as others and, therefore, the thickness of the walls of [Medtronic]'s stents vary by more than 100%" (D.I. 1398 at 8), the method for measuring thickness was in dispute between the parties, and Cordis offered evidence of a method for measuring thickness under which the walls of the accused stents do not vary by as much as 100 percent. (D.I. 1387 at 537:3, 539:17-18; D.I. 1389 at 1185:20-24)

Medtronic contends that several assertions by Cordis' counsel - that a 100 percent variation in stent wall thickness would be "impossible" and that Medtronic's 100 percent variance test is a "mathematical trick" - are misleading. (D.I. 1398 at 14-16) However, based on the method of thickness measurement advanced by Cordis, with use of the diameter of a round stent strut as its focus, there is no evidence on the record that the thickness of the walls of any of the accused stents vary by a positive 100 percent over the diameter of the round stent strut of each stent. Additionally, Cordis offered evidence that a deviation of negative 100 percent would be impossible, a contention supported by the testimony of Dr. Wagoner, Medtronic's expert. (D.I. 1389 at 1167-1168) Medtronic offered a different method for measuring thickness and a different theory for calculating a variation in thickness, but these approaches were not embraced by the jury. As for the statements by Cordis'

counsel that Medtronic's variance test was a "mathematical trick" or the result of "phoney math," there is no evidence to suggest that these statements unfairly influenced the jury; the statements were delivered to the jury in the context of arguments which provided the underlying reasoning for the statements. (D.I. 1391 at 1767:7-1768:18; 1855:8-1858:13) Upon review, there is nothing in the record to suggest that the assertions by Cordis' counsel on this issue were unsupported by evidence or that the assertions caused unnecessary confusion to the jury.

Medtronic contends that Cordis' arguments with respect to the impossibility of having a 100 percent variance in the wall thickness of a stent were inconsistent with the decision of the Federal Circuit and with the file history of the '762 patent. (D.I. 1398 at 11-13) Medtronic asserts that Cordis placed great emphasis on an allegedly incorrect interpretation of the "substantially uniform thickness" limitation and, therefore, the court's failure to provide a curative instruction on that limitation was error. (Id.) Even if the court were to find that the arguments offered by Cordis as to 100 percent variation were inconsistent with the ruling of the Federal Circuit and the file history of the '762 patent, the jury was not presented with Cordis' arguments in isolation; Medtronic took the opportunity to offer arguments as to its interpretation of this limitation (167:15-169:15; 174:3-180:10), the court instructed the jury as

to this limitation (D.I. 1391 at 1936), and the court reminded the jury to consider only the evidence and not be swayed by unsupported arguments by counsel (D.I. 1386 at 110-111, 115; D.I. 1391 at 1923). While Medtronic points to the alleged need for a curative instruction, it fails to specify the nature of the inadequacy of the instructions which were actually provided to the jury. Medtronic does state that "the jury was left to guess as to whether the '100 percent' variation language was relevant or not," but offers no reason why this statement is true. (D.I. 1398 at 13) In short, Medtronic has neither provided sufficient evidence that the conduct of Cordis' counsel unduly influenced the jury nor explained how the instructions delivered to the jury by the court were erroneous. Even if there were an error on the part of the court in failing to deliver a curative instruction, Medtronic has not offered evidence that such an error would have been prejudicial; instead, Medtronic states that "[i]n light of Cordis's counsel's repeated misstatements of the 100% variation exclusion during closing, the prejudice is clear." (Id.) No curative instruction language is suggested by Medtronic in its brief, and absent is any analysis of how a curative instruction would have impacted the jury's verdict in light of the evidence on record.

Medtronic next argues that the Federal Circuit's "circle within a circle" method of identifying the "thickness" of the

walls of a stent by use of imaginary circles was mischaracterized by Cordis, as Cordis argued that the method involved "magic circles," was a "big trick," and was a "phony look at the issue." (D.I. 1398 at 14-16) Medtronic argues that these statements were both incorrect and misleading. (Id.) First, as noted above, the "circle within a circle" methodology discussed by the Federal Circuit was not offered for purposes of claim construction. (D.I. 1337 at 5-6) The Federal Circuit offered that methodology to show that "a stent formed from struts with circular or ellipto-rectangular cross-sections can have a wall of substantially uniform thickness." Cordis v. Medtronic AVE Inc., 339 F.3d at 1362. In fact, the Federal Circuit noted that when using the methodology, "[t]he thickness of the wall is equal to the diameter of each round strut." (Id.) Secondly, the methodology was not offered as a mandatory method of analysis by which infringement was to be determined, but rather as an example to support the conclusion that "a stent with round struts can have a substantially uniform thickness as long as the round struts have substantially the same diameter." (Id.) In other words, the Federal Circuit's mention of the "circle within a circle" methodology was not an endorsement of that method as the only way to measure stent wall thickness. Thus, no prejudice took place when Medtronic was not permitted to point out to the jury that the "circle within a circle" methodology had been

endorsed by the Federal Circuit. Additionally, contrary to Medtronic's assertion, it had every opportunity to suggest that the methodology was not "phony" or a "trick" and that the approach used and results obtained by Cordis' experts were inconsistent with that methodology. In fact, Medtronic took advantage of these opportunities. Medtronic was simply not permitted to suggest that the "circle within a circle" methodology was endorsed by the Federal Circuit, for such a statement would have been untrue.

As its next argument in seeking to prove that a "misleading and incomplete" record prejudiced its case, Medtronic contends that it was improperly denied any opportunity to introduce evidence about the "clinical significance" of the variably thick crowns of the accused stents. (D.I. 1398 at 16-17) Because the "clinical significance" of the alleged variations in thickness near the ends of the Medtronic stents is not relevant to infringement, no prejudice has occurred due to the exclusion of evidence dealing with this issue.[3] In addition, Medtronic was

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[3]Medtronic argues that the excluded testimony of Dr. Heuser would have shown that "the variable thickness of the crown is 'substantial,' as evidenced by the clinical benefits is provides: e.g., improved treatment of calcified and tortuous lesions; improved trackability and conformability; and improved side branch access." (D.I. 1398 at 16) In addition, Medtronic contends that an excluded videotape would have shown "a procedure by Richard Schatz, where he marveled at [a Medtronic] stent's ability to 'pass [where] nothing else will go' due to its 'round' edge." (Id.) While evidence of these alleged clinical benefits may provide one with information as to the medical and commercial

able to address the clinical significance of the crowns of its stents at various times during trial (D.I. 1389 at 1016:1-24, 1024:9-17, 1036:16-1037:3, 1086:19-1087:10, 1125:18-1128:12) Finally, while the Federal Circuit stated that "the 'substantially uniform' limitation also requires that the thickness of the wall surface be sufficiently uniform along its length and between members to allow uniform expansion of the stent" (D.I. 1398 at 17, quoting Cordis, 339 F.3d at 1360), this does not mean that evidence of the clinical performance of the accused stents is relevant to whether the "substantially uniform thickness" limitation is met. First, the underlying thickness of a stent's wall surface remains the focus of this requirement,

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viability of the accused stents, such evidence is irrelevant to infringement since the utility of such a stent in a particular application does not offer information on whether the thickness of the wall surface of the stent is "substantially uniform." Rather, such evidence focuses on the differences between the accused stents and other available devices in a clinical setting. More importantly, the presence of a clinically significant feature in an accused device distinct from that found in a patented product does not correlate with an absence of infringement of the underlying patent. It was partially for this reason that the court noted that "product-by-product comparisons (as well as product-by-preferred embodiment comparisons) may **not** be introduced for purposes of an infringement analysis." (D.I. 1337 at 7-8) This reason also played a role in the court's exclusion from Medtronic's infringement analysis of assertions that defendants' accused stents are superior to the claimed invention. (Id. at 8) Notably, the evidence of clinical significance cited in Medtronic's brief focuses almost solely on product-to-product comparisons (e.g., "**improved** treatment... **improved** trackability and conformability; and **improved** side branch access"; "... ability to 'pass [where] **nothing else** will go'").

such that evidence of clinical significance of the accused stents due to variably thick crowns is not informative on the issue unless the evidence shows how the level of uniformity of the accused stent wall's thickness would impact the uniformity of expansion of the stent. Second, and more importantly, Medtronic does not represent that the alleged variable thickness of the crowns of the accused stents would have any impact on whether there could be uniform expansion of the stent. As a result, the evidence of clinical significance suggested by Medtronic is irrelevant to the issue of infringement and its exclusion for purposes of that issue is not a basis of prejudice.

In arguing that improper arguments by Cordis may have influenced the jury, Medtronic contends that Cordis introduced several "irrelevant and extraneous arguments" about the witnesses and the parties involved in the case. Secondly, Medtronic argues that Cordis' representations to the court led to the exclusion of evidence relevant to rebut Cordis' argument of secondary considerations.

Among the "irrelevant and extraneous arguments" which Medtronic alleges were made by Cordis is the elicitation by Cordis of "testimony from both sides' experts that neither [Medtronic], Dr. Palmaz, Dr. Gianturco, nor others personally came up with the idea claimed in the '984 patent." (D.I. 1398 at 17) Medtronic contends that these arguments were made in

violation of this court's ruling on the motions in limine. However, the court noted that Medtronic's motion in limine was specifically directed to precluding Cordis' counsel from asking Dr. Van Breda if he had personally thought up the invention. (D.I. 1390 at 1510) Thus, Cordis did not violate the court's ruling.

Medtronic next argues that the testimony at issue was nevertheless irrelevant, because "[t]he relevant inquiry is what the hypothetical person would have understood from the references and not what any actual person subjectively realized at the time." (D.I. 1398 at 18) Medtronic asserts that neither the court nor Cordis acknowledged that the failure of Palmaz and Gianturco to come up with Schatz's invention does not mean that either of them disparaged it or thought it would be unsuccessful; Medtronic argues that a new trial on the obviousness of the '984 patent should be granted by virtue of these facts alone. However, as Cordis has argued, an individual expert's personal "disbelief" that a particular solution would "adequately solve the problem" is "highly probative" of nonobviousness. (D.I. 1407 at 29, quoting Envtl. Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 697 (Fed. Cir. 1983)) Thus, although the perception of a hypothetical person of ordinary skill must remain the focus of the obviousness inquiry, evidence of the opinions of particular individuals may be relevant. For example, the fact that Dr.

Gianturco authored a reference which described a straight connector yet he subsequently pursued a substantially different approach in pursuing coil stents suggests that Dr. Gianturco rejected the path set out in the '984 patent. Even if the arguments advanced by Medtronic on the issue of obviousness had been of questionable relevance, the court provided a thorough instruction to the jury on the issue of obviousness, such that any irrelevant arguments would have been unlikely to influence the jury. (D.I. 1391 at 1941-1949) Overall, Medtronic has failed to show that prejudice was present at trial such that a new trial would be warranted on the obviousness of the '984 patent.

Medtronic next argues that a new trial is warranted due to the alleged prejudice which resulted from Cordis' prejudicial statements. Medtronic alleges that prejudice resulted when Cordis questioned the motives of Medtronic in defending the suit and challenged the integrity of Dr. Ersek, Mr. Hammerslag, and Cordis (before it was purchased by Johnson & Johnson). (D.I. 1398 at 20-23) Medtronic contends that several statements made by Cordis with respect to the reasons for Medtronic to defend the suit are "irrelevant, based upon purported facts not in evidence, and are clearly intended to elicit a favorable verdict based upon emotion, not reason." (Id.) However, Cordis cited the testimony of witness Bob Croce to support its arguments in these areas.

(D.I. 1407 at 30, citing D.I. 1387: 432-433, 458-459, 495) Thus, none of the elements of prejudice alleged by Medtronic are present.

The next allegation by Medtronic is that Cordis' reference to money damages cannot be harmless because Cordis had previously been successful in convincing the court to prohibit Medtronic from referring to Cordis' request for injunctive relief, as Cordis had maintained that such arguments could cause "unfair prejudice." (D.I. 1398 at 20, citing D.I. 836, Tab 1 at 2-3) However, Medtronic suggests neither how Cordis has referred to money damages nor why such a reference, if made, would have been prejudicial.

Next, Medtronic asserts that Cordis impermissibly attacked Mr. Hammerslag and Dr. Ersek by "espousing conspiracy theories" and "present[ing] 'facts' to the jury not of record." (D.I. 1398 at 21-22) However, the arguments advanced by Cordis in these areas are supported by the license of Hammerslag to Cordis (DX 2599)[4] and the testimony of Dr. Buller (D.I. 1388 at 672:4-9), Dr. Heuser (D.I. 1390 at 1597:20-22, 1599:20-23) and Dr. Ersek (D.I. 1390 at 1341:17-1343:3). In addition, while this evidence offered by Cordis is unfavorable to Medtronic, the arguments which stem from it are based on facts of record and do not amount

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[4] "DX " refers to exhibits submitted by defendants at the trial held between March 4, 2005 and March 14, 2005. For example, DX 6 would be defendants' exhibit number 6.

to "conspiracy theories." Even if these arguments of Cordis' counsel were not supported by facts of record, the jury was instructed to refrain from considering the unsubstantiated arguments of counsel as evidence; such arguments, if made, would thus be unlikely to engender prejudice in the jury. (D.I. 1386 at 110-111, 115; D.I. 1391 at 1923)

As an additional suggestion that Cordis introduced "irrelevant and extraneous" arguments, Medtronic argues that Cordis' counsel asked the jury to "honor" Dr. Palmaz for irrelevant reasons in rebuttal closing. (D.I. 1398 at 22-23) Counsel for Cordis had explained that under U.S. patent law, Dr. Palmaz's patent would expire on November 7, 2005. (D.I. 1391 at 1900:6-9) As counsel for Cordis explained, "Once it expires, anyone is free to use its ideas without payment. That's the bargain you make with the Patent Office when you disclose your invention. You have a limited period to profit exclusively, and then you share your ideas with the world." (D.I. 1391 at 1900:9-14) As Medtronic properly noted, "[Medtronic] is no more or less likely to infringe simply because the '762 patent is due to expire." (D.I. 1398 at 22) However, Cordis never asserted that the prospective expiration of the '762 patent would have anything to do with infringement. As counsel for Cordis thereafter stated to the jurors, "I ask you with your verdict to honor Dr. Palmaz's work under the law and the charge as the Judge will give it.

We're not asking for any favors here . . . We're asking . . . that this infringer be found responsible for what it has done." (D.I. 1391 at 1900:15-1901:8) The information provided to the jury in Cordis' argument is consistent with the court's instruction to the jury regarding the considerations required to assess infringement.[5] In addition, since the jurors were not asked to make an assessment of damages, Medtronic's concern that the arguments of Cordis' counsel may have caused the jurors to be "misled to believe that the damages that Cordis might seek are limited to the period between the verdict and the expiration of the patent" is without merit. (D.I. 1398 at 22-23) As a result, the reasons for which Cordis requested the jury to "honor" Dr. Palmaz were not irrelevant, and it was not reasonably probable that Cordis' presentation to the jury was a source of prejudice.

As a final allegation of "irrelevant and extraneous" arguments by Cordis, Medtronic cites "repeated efforts to equate the patent claims to the balloon expandable stent." (D.I. 1398 at 23, fn. 1) In support of this argument, Medtronic simply

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[5]As the court explained in its instructions:

> Patent law provides that any person or business entity which makes, uses, offer to sell, sells, or imports, without the patent owner's permission, any product or method legally protected by at least one valid claim of a patent in the United States **before the patent expires**, infringes the patent.

(D.I. 1391 at 1938:23-1939:5) (emphasis added)

cites several references by Cordis' counsel to "balloon expandable stent" and reminds the court that "[c]laim 23 of the '762 patent, and claims 1 and 3 of the '984 patent, do not even claim a balloon expandable stent." (Id.) It is unclear precisely why Medtronic believes such references by counsel for Cordis should warrant a new trial. If Medtronic is asserting that the patent claims do not encompass **all** balloon expandable stents, such an assertion is accurate; however, Medtronic does not cite to any specific reference by Cordis' counsel where any or all of the asserted claims are equated with all balloon expandable stents.[6] Even if there were a significant risk that the jury would equate the asserted claims to all balloon expandable stents due to the statements by counsel for Cordis, counsel for Medtronic took the opportunity in its opening statement to suggest against such an equation, and the court's instructions repeatedly cautioned against considering unsupported

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[6]In fact, the references cited by Medtronic appear to be attempts by Cordis in its opening to explain the state of the art at the time the claimed invention was conceived, portray Dr. Palmaz as the inventor of the balloon expandable stent, and explain the import of such an invention. See, e.g., D.I. 1386 at 119:16-18 ("This case is about one of the most amazing devices of the last quarter century, the balloon expandable stent."), D.I. 1386 at 120:7-8 ("Dr. Palmaz invented the balloon expandable stent"), D.I. 1386 at 121:24-122:3 ("Let me tell you a little bit about the invention and the problem that it was set out to solve. This is the balloon expandable stent of Dr. Palmaz, the Palmaz-Schatz stent"), D.I. 1386 at 126:24-127:3 ("But in the beginning, back when Dr. Palmaz first had his idea, there weren't any stents, there weren't any balloon expandable stents . . . .").

arguments by counsel as evidence. (D.I. 1386 at 110:23-111:1, 158:7-10, 164:15-20, 167:3-6; D.I. 1391 at 1923) If Medtronic is instead asserting that the asserted claims cannot be equated with **any** balloon expandable stent because not all of the asserted claims actually claim such a stent, it appears that Medtronic had itself contradicted this assertion when Medtronic's counsel noted, "This ['762] patent is directed to a very specific type of balloon expandable stent." (D.I. 1386 at 167:5-6) Thus, Medtronic itself made reference to "balloon expandable stent" in describing the scope of the patent claims of the '762 patent and cannot argue that a similar reference by Cordis would be prejudicial.

As an additional allegation of prejudice, Medtronic argues that representations by Cordis to the court impermissibly led to the exclusion of evidence relevant to the rebuttal of Cordis' arguments of secondary considerations of nonobviousness. (D.I. 1398 at 23-29) Medtronic notes that before trial, the court had ruled that certain evidence which related to the significance and novelty of features of the accused stents could not be introduced for purposes of an infringement argument, but may be admissible to support an invalidity argument. (Id. at 23-24) As Medtronic argues, "Such evidence included product-to-product comparisons, concerns about the safety of the Palmaz-Schatz stent and [Medtronic]'s patents." (Id. at 23-24) Medtronic alleges that

it was precluded from offering much of that evidence even for invalidity because Cordis falsely represented that it would not rely on Medtronic's stents in support of secondary considerations of nonobviousness. (Id. at 24) Medtronic contends that when Cordis made arguments to the effect that the success of the "entire industry" was due to the Palmaz invention, it implicitly relied on Medtronic's stents in support of secondary considerations of nonobviousness. (D.I. 1398 at 24-25) Thus, Medtronic alleges that it was denied an opportunity to refute the presence of a nexus between the claims and the following secondary considerations: commercial success, copying, and praise for Dr. Palmaz's invention. (D.I. 1398 at 23-29) Medtronic argues that this denial was prejudicial. (Id. at 29)

As for Medtronic's argument that Cordis was using the Medtronic stents to show commercial success, this does not appear to be the case. While Cordis may have argued that "the entire industry has been created based on the work of Dr. Julio Palmaz" (D.I. 1386 at 129:1-10), no evidence was cited by Medtronic to suggest that Cordis was at any point referring to the commercial success of Medtronic's stents. The accused Medtronic stents may comprise part of the "entire industry" mentioned by Cordis, the genesis of that industry by Palmaz appears to be the focus of Cordis' argument rather than the commercial success of any particular stents. It appears that the only reference to

commercial success by Cordis was witness testimony that Cordis' stents had accumulated billions of dollars in sales. (D.I. 1387 at 442:23-443:21, 456:6-12, 457:9-458:5) Moreover, it is unlikely that any prejudice to Medtronic would have occurred even if Cordis had referred to Medtronic stents as a source of commercial success, because the court's instruction to the jury was to consider "[c]ommercial success of **Cordis's** products covered by the patents in suit" as indicative of nonobviousness. (D.I. 1391 at 1948:14-15) Thus, there was neither error nor prejudice with respect to the court's exclusion of evidence which Medtronic had sought to use to refute the secondary consideration of commercial success of the Medtronic stents, since the jury was never asked to evaluate such a consideration for purposes of analyzing obviousness.

With respect to Medtronic's argument that Cordis was offering evidence as to the secondary consideration of copying, this argument also is not supported by the record. Medtronic contends that Cordis was alleging copying by inferring that "the 'entire' industry adopted the [Palmaz balloon expandable stent] design." (Id. at 24-28) However, counsel for Cordis does not advance the argument that Medtronic copied the product and patent which were based on the design of Palmaz. Cordis does allege infringement of the '762 patent throughout trial, but its allegation is distinct from the secondary consideration of

copying, which usually requires a showing that an infringer specifically focused on the design of a patentee's product or patent and based his own product on that design. See, e.g., Akamai Techs. v. Cable & Wireless Internet Servs., 344 F.3d 1186, 1196-97 (Fed. Cir. 2003). It appears that no prejudice to Medtronic would have occurred even if Cordis had alleged copying by Medtronic as a secondary consideration of nonobviousness, because the court's instruction to the jury did not include copying as a consideration for the jury to evaluate in its analysis of obviousness. (D.I. 1391 at 1947:19-1949:5) Therefore, the court did not commit error in deciding to exclude evidence that might have been relevant to rebutting an allegation of copying, and no prejudice to Medtronic resulted from this decision.

With respect to Medtronic's argument that Cordis was using the Medtronic stents to show praise for the invention of Dr. Palmaz, there is a lack of evidence to establish such a point. In support of this contention, Medtronic cites to the following statement by Cordis: "Cordis' assertion that Dr. Palmaz created the stent industry is **not** an assertion that all stents practice his patent. Rather, it is a legitimate secondary consideration reflecting praise for, and acceptance of, Dr. Palmaz's invention." (D.I. 1345 at 4-5 (emphasis in original)) This statement was offered by Cordis to oppose the alleged relevance

of Medtronic's use of product-to-product comparisons as evidence. Cordis does not offer such evidence to suggest that the Medtronic stents are a source of praise for Dr. Palmaz, but rather to show that Dr. Palmaz created an industry based on a product for which he has received much praise. In other words, while evidence of praise for the Palmaz invention was offered by Cordis as evidence of nonobviousness, Cordis did not rely on the Medtronic stents for evidence of this praise. Therefore, the court did not commit error in deciding to exclude evidence of Medtronic that might have been relevant to opposing praise as a secondary consideration of nonobviousness. Likewise, no prejudice to Medtronic resulted from the court's decision.

As its final argument for a new trial, Medtronic argues that the jury's infringement and nonobviousness verdicts are not supported by the weight of the evidence. (D.I. 1398 at 29-31) Medtronic cross-applies to this argument the contentions it offered in its motion for judgment as a matter of law. Medtronic argues that Cordis relied on allegedly "irrelevant and prejudicial arguments" to support its case on validity and infringement. (Id., D.I. 1414 at 19-20) As discussed above, the arguments advanced by Cordis were consistent with its theory of the case, adequately supported by evidence, and did not cause prejudice to Medtronic. For example, Cordis offered evidence that one of ordinary skill in the art would measure the stent

wall thickness as the "maximum thickness of the cross-section" of the stent and that the entire stent wall was to be measured in this manner. (D.I. 1390 at 1146:23-1147:5) In contrast, Medtronic offered arguments and evidence which suggested that the correct method for measuring stent wall thickness is with the use of a "circle within a circle method," which would result in a stent comprised of material having a uniform diameter to possibly have a non-uniform wall thickness. (D.I. 1386 at 177:12-180:10; D.I. 1389 at 1110:22-1111:11) The jury could have reasonably concluded that the evidence from Cordis was more credible than the evidence offered by Medtronic. In light of this tenable conclusion, there is insufficient reason to suggest that the jury's verdict on infringement was not supported by the weight of the evidence.

Similarly, the jury's conclusion on invalidity was well supported by evidence in the record. For example, Medtronic correctly notes that it offered evidence from various witnesses to suggest that the limitations of the '762 and '984 patents were obvious. (D.I. 1398 at 30) However, Cordis responds by asserting that it offered substantial evidence to show that important differences exist between the prior art and the asserted claims such that they were not anticipated, and that the prior art does not render the asserted claims obvious in light of the prior art. (D.I. 1407 at 31-33) In addition, Cordis

contends that it offered evidence as to several of the secondary considerations of nonobviousness, suggesting that various factors made it unlikely that the asserted claims were obvious in light of the prior art. (Id. at 33-35) While Medtronic asserts that Cordis relied "extensively on irrelevant arguments," the record reveals that the arguments advanced by Cordis were relevant to the issue of obviousness and consistent with the instructions on the law which were provided by the court. As noted above, Cordis did not rely on the Medtronic stents as evidence of secondary considerations; thus, the court's decision to preclude Medtronic from offering certain evidence on this issue was not prejudicial to Medtronic. Even when the court views the evidence outside of the light most favorable to Cordis, there remains a substantial body of evidence which weighs in support of the verdict reached by the jury.

Based on the complete record of evidence and arguments offered at trial, the jury's infringement and nonobviousness verdicts are supported by the weight of the evidence; no new trial will be granted on these issues, as there is no danger that a miscarriage of justice will occur if the jury's verdict stands.

V. CONCLUSION

For the reasons stated, Medtronic's motion for a new trial on Cordis' patent infringement claims and Medtronic's invalidity counterclaims is denied and Medtronic's motion for judgment as a

matter of law on Cordis' patent infringement claims is denied.

An order consistent with this memorandum opinion shall issue.